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10/064,380	07/08/2002	Michael L. Beigel	P313D	4017

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EXAMINER

ZIMMERMAN, BRIAN A

ART UNIT	PAPER NUMBER
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2635

DATE MAILED: 04/04/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/064,380

Applicant(s)

BEIGEL ET AL.

Examiner

Brian A Zimmerman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-80 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-80 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the two-winding transformer associated with each transistor of claim 40 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 6-17,20-24,40 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 6-17, the specification does not describe the specific combinations of assignments between the modulation technique and the specific associated data.

Regarding claims 20-24, the specification does not describe the specific weighted integrations claimed.

Regarding claim 40, the specification does not describe a two-winding transformer associated with each transistor.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 32-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 32, the terms "the data sequence", "the tag data" and "the data group" lack proper antecedent basis in the claim. Claims 33-35 are dependent on claim 32, include all the limitations of claim 32, yet do not correct the error addressed above, and are therefore rejected for the same reasons.

Regarding claim 33, this claim is confusing. It is confusing since it is defined that the synchronizing bits are part of a preamble and the preamble contains other elements, then how can it be determined that the received synchronizing bits are the preamble.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 32,33 and 72 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Waraksa (4942393).

Waraksa shows a reader that receives data from a tag. The reader receives a data sequence transmitted by the tag, see figure 9. The data sequence includes a synch sequence, an identity code tag data and error bits. The error bits are used to determine if the received sequence is 'correct' or 'incorrect'. See col. 5 lines 55+.

4. Claims 36-40 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Buchele (5276910).

Buchele shows a reader with a coil 190, a capacitor 160 coupled to the coil. Buchele also shows the reader to include a means to drive the coil including four FETs arranged in a bridge to recycle the energy of the driver circuitry, see col. 3 lines 10+.

5. Claims 70,71,73-80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carroll (5517194).

Carroll shows a method of interrogating a tag by generating an alternating magnetic field. See col. 7 lines 5-15. The reader sends data to the tag preceded by a bit timing clock signal. See figure 4b. The tag sends a signal to the reader that includes data that is preceded by bit timing clock signal.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1,3,41,43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chatelot (4864633) and Kurusu (3587017).

Chatelot shows a reader for communicating to a "tag", see figure 2. Chatelot shows the reader including a coil 13, a capacitor 19, a means for coupling the capacitor to the coil 24, a means to drive the coil with a driving signal 37, a mean to generate the driving signal 36, and a means to extract data from the tag 22. Chatelot does not expressly show connecting the capacitor to the coil and other circuits using a transformer.

In an analogous art, Kurusu shows a transformer connecting a capacitor 21 and other circuits to the antenna 11. The transformer provides isolation between the antenna coil and the other circuits. Kurusu shows the relationships of the coil, capacitor and extractor circuit and the first and second windings of the transformer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a transformer in the Chatelot system to provide isolation between the communication antenna coil and the other circuits in the reader as suggested by Kurusu.

7. Claims 1,2,4,41,42,44,45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chatelot (4864633) and Ogita (4278980).

Chatelot shows a reader for communicating to a "tag", see figure 2. Chatelot shows the reader including a coil 13, a capacitor 19, a means for coupling the capacitor to the coil 24, a means to drive the coil with a driving signal 37, a mean to generate the driving signal 36, and a means to extract data from the tag 22. Chatelot does not expressly show connecting the capacitor to the coil and other circuits using a transformer.

In an analogous art, Ogita shows a transformer connecting a capacitor 34 and other circuits 37,38,39 to the coil 21. The transformer provides isolation between the antenna coil and the other circuits see col. 5 lines 10+.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a transformer in the Chatelot system to provide isolation between the communication antenna coil and the other circuits in the reader as suggested by Ogita.

8. Claims 5-13,25-31,47,48,50-60,62-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carroll (5517194).

Carroll shows a reader 10 which includes a coil 18, a means for driving the coil 16, a means for generating a driving signal 12 and means to embed bit-timing in the driving signal by transmission of synchronization 114 (figure 4b). Carroll also shows embedding a sequence of data bit to be communicated to the tag as work 118. Carroll does not expressly show a capacitor for coupling the coil and the driving means in the

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reader. Carroll does show in the transponder or tag, that the use of a capacitor 44 between the coil 42 and the transmission driver 72 can provide tuning. See col. 20 lines 14+. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a capacitor between the coil and the transmission driver to provide tuning.

Regarding claims 6-11,57-60 Carroll shows the use of PSK. It is well understood that PSK is a modulation technique where the phase of the carrier signal is modified in accordance with data (here the driving sequence) to convey ones and zeros.

Regarding claims 12,13,25-31,61-64 Carroll also shows the use of FSK. It is well understood that FSK is a modulation technique where the frequency of the carrier signal is modified in accordance with data (here the driving sequence) to convey ones and zeros.

9. Claims 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waraksa (4942393) as applied to claims 32 and 33 above, and further in view of Batz (4839642).

In an analogous art, Batz shows storing the received bits and replacing the oldest bit in memory with the next received bits, see figure 6 and col. 14 lines 42+. This provides a simple way of sorting the received signal into sync, data and error bits.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used shift registers in the Waraksa system in order to provide a simple way of sorting the received signal for decoding.

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10. Claims 49 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carroll (5517194) as applied to claims 47 and 56 above, and further in view of what is common in the art.

The Examiner takes Official Notice that amplitude shift keying is a common alternative to phase shift keying or frequency shift keying, and to have substituted this type of modulation scheme for that used in Carroll would not have involved an unobvious step.

11. Claims 14-17, 61, 64-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carroll (5517194) as applied to claims 5 and 56 above, and further in view of McFarlane (3223779).

In an analogous art, McFarlane shows a communication system that communicates using both FSK and PSK to increase bandwidth. Much like QPSK, this would provide 4 different (or orthogonal) keyed combinations to transmit data that can be called "00" "01" "10" "11". Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used both FSK and PSK simultaneously in the Carroll in order to increase the bandwidth of the system.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA

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1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1-4, ~~41-46~~, 56-69 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 27 of U.S. Patent No. 6472975. Although the conflicting claims are not identical, they are not patentably distinct from each other. The pending claims differ from the patented claims by specifically defining the structure that was present in the pending claims as means plus function. For example, pending claim 1 differs from patented claim 27 in that the coupling means in pending claim 1 is limited to the structure of a transformer. Pending claim 27 includes all the same elements, but defines the coupling means strictly using means plus function. In order to determine what structure is being claimed by claim 27 one must look to the specification and in doing so realizes that the structure being defined in claim 27 is in fact a transformer. The patented claims are interpreted in light of the specification and therefore cover the structure now claimed. The pending claims further differ from the patented claims by being broader in that the pending claims do not include some limitations that are present in the patented claims. It has been held that broader claims in a later application constitute obvious double patenting of narrow claims in an issued patent. See *In re Van Ornum and Stang*, 214, USPQ 761, 766, and 767 (CCPA) (the court sustained an obvious double patenting rejection of generic

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claims in a continuation application over narrower species claims in an issued patent);

In re Vogel, 164 USPQ 619, 622, and 623 (CCPA 1970) (generic application claim

specifying "meat" is obvious double patenting of narrow patent claim specifying "pork").

13. Claims 5,36-40 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 28 of U.S. Patent No. 6472975. Although the conflicting claims are not identical, they are not patentably distinct from each other. The pending claims differ from the patented claims by being broader in that the pending claims do not include some limitations that are present in the patented claims. It has been held that broader claims in a later application constitute obvious double patenting of narrow claims in an issued patent. The pending claims further differ from the patented claims by specifically defining the structure that was present in the pending claims as means plus function. The patented claims are interpreted in light of the specification and therefore cover the structure now claimed. MPEP 804 states that when considering whether the invention defined in a claim of an application is an obvious variation of the invention defined in the claim of a patent, the disclosure of the patent may not be used as prior art. (However) This does not mean that one is precluded from all use of the patent disclosure. The specification can always be used as a dictionary to learn the meaning of a term in the patent claim. In re Boylan, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). In re Vogel, 422 F.2d 438, 441-42, 164 USPQ 619, 622 (CCPA 1970). The court in Vogel recognized "that it is most difficult, if not meaningless, to try to say what is or is not an obvious variation of a claim," but that one

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can judge whether or not the invention claimed in an application is an obvious variation of an embodiment disclosed in the patent which provides support for the patent claim.

According to the court, one must first "determine how much of the patent disclosure pertains to the invention claimed in the patent" because only "[t]his portion of the specification supports the patent claims and may be considered." For example, pending claim 36 differs from patented claim 27 in that pending claim 36 defines the structure of the driving means to include four FETs in a bridge arrangement. Patented claim 27 defines the driving means strictly in a means plus function manner. In order to determine the meaning of the driving means in patented claim 27 one must look to the specification to learn that in fact the driving means set forth in Patented claim 27 is in fact the structure now set forth in pending claim 36.

14. Claims 6-17,19-24,47-55 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7 and 28 of U.S. Patent No. 6472975. Although the conflicting claims are not identical, they are not patentably distinct from each other. The pending claims differ from the patented claims by being broader in that the pending claims do not include some limitations that are present in the patented claims. It has been held that broader claims in a later application constitute obvious double patenting of narrow claims in an issued patent. The pending claims further differ from the patented claims by specifically defining the structure that was present in the pending claims as means plus function. The patented

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claims are interpreted in light of the specification and therefore cover the structure now claimed.

15. Claims 18 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 20 of U.S. Patent No. 6472975. Although the conflicting claims are not identical, they are not patentably distinct from each other. The pending claims differ from the patented claims by being broader in that the pending claims do not include some limitations that are present in the patented claims. It has been held that broader claims in a later application constitute obvious double patenting of narrow claims in an issued patent. The pending claims further differ from the patented claims by specifically defining the structure that was present in the pending claims as means plus function. The patented claims are interpreted in light of the specification and therefore cover the structure now claimed.

16. Claims 25-31 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 11 of U.S. Patent No. 6472975. Although the conflicting claims are not identical, they are not patentably distinct from each other. The pending claims differ from the patented claims by being broader in that the pending claims do not include some limitations that are present in the patented claims. It has been held that broader claims in a later application constitute obvious double patenting of narrow claims in an issued patent. The pending claims further differ from the patented claims by specifically defining the structure that was present in the

pending claims as means plus function. The patented claims are interpreted in light of the specification and therefore cover the structure now claimed.

17. Claims 70-80 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 21 and 22 of U.S. Patent No. 6472975. Patented claims 21 and 22 show the use of a modulated magnetic field to interrogate a tag and receive data from the tag. In an analogous art, Carroll shows the use of an interrogation system to send packeted data with synch and error fields in addition to a data field in order to provide timing and error control for asynchronous communication. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the packet format of Carroll in the Patented claim 21 or 22 interrogator system in order to provide timing and error control for asynchronous communication.

18. Claims 36-40,70-80 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 16 of U.S. Patent No. 5235326 in view of Carroll. Although the conflicting claims are not identical, they are not patentably distinct from each other. Patented claim 16 shows the use of a modulated magnetic field to interrogate a tag and receive data from the tag. In an analogous art, Carroll shows the use of an interrogation system to send packeted data with synch and error fields in addition to a data field in order to provide timing and error control for asynchronous communication. Therefore, it would have been obvious to one


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of ordinary skill in the art at the time of the invention to have used the packet format of Carroll in the Patented claim 16 interrogator system in order to provide timing and error control for asynchronous communication.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian A Zimmerman whose telephone number is 703-305-4796. The examiner can normally be reached on Off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Horabik can be reached on 703-305-4704. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.



Brian A Zimmerman
Primary Examiner
Art Unit 2635

BaZ
April 1, 2003

MICHAEL HORABIK
SUPERVISORY PATENT EXAMINER
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